

REMARKS

The allowability of claims 4, 16 and 19-21 is acknowledged appreciatively.

The claim objections are attended to above as courteously suggested in the Action.

Such attention is non-narrowing, as is additional amendment of claims 1 and 2 to emphasize the stoma or restriction control by the two chambers claimed, whereby no Festo-like limitations arise.

35 USC § 102 (items 3 and 4 of the Office Action)

US 4,399,809 A (Baro, et al.) discloses an artificial sphincter for use at stoma which is different from a stomach band as described in the present patent application. The artificial sphincter according to the Baro, et al. reference shows a strip or band of chambers intended to be wrapped around the outside of the intestine near the stoma. All chambers communicate with each other and are charged and discharged to a tube which extends from one of the chambers and this tube extends up to the pump chamber of a manually actuated suction-impeller pump. Since the chambers communicate with each other through small passage ways, the pressure which prevails in all of the chambers is approximately the same (s. column 3, lines 45-48 of the Baro, et al. reference). Inflation and deflation, respectively, are done by a manually operated suction-impeller pump being connected with one of the chambers via the conduit (reference no. 4).

The artificial sphincter comprises more chambers to achieve a reduced central space occupied by the intestine to a minimum as shown in fig. 3 of the Baro, et al. reference.

In contrast to this state of the art the present application relates to a controllable gastric band for controlling the restriction of the stoma having two or more chambers

communicating with each other in a manner to ensure the automatically adjustment of the stoma restriction by a displacement of the liquid between the chambers. According to a first embodiment of the present invention (see figs. 1 and 2 of the present application) two chambers 1, 2 are connected via an auxiliary chamber 3. Further a valve 5 arranged between the first chamber 1 and the auxiliary chamber 3 permits the outflow of liquid from chamber 1 into the auxiliary chamber 3. A further valve 6 arranged between the stomach restricting chamber 2 and the auxiliary chamber 3 permits the outflow of the auxiliary chamber 3 into the stomach restriction chamber 2. The passage of solid food through the stoma, thus, causes an increase in the pressure prevailing in the two chambers 1, 2 bordering on the gastric wall from a resting pressure  $p_1$  to a pressure  $p_2$ . Liquid is, thus, pressed from the chamber 1 into the auxiliary chamber 3. The valve 5 prevents the backflow from the auxiliary chamber 3 into the chamber 1. On account of its function as an air chamber, the auxiliary chamber 3 stores the elevated pressure  $p_2$ . After the passage of a bite through the stoma, the liquid pressure in the two gastric-wall-near chambers 1 and 2 again drops to a resting pressure  $p_1$ . The auxiliary chamber 3, which is under the elevated pressure  $p_2$ , subsequently evacuates the liquid into the stoma-restricting chamber 2. In this case, liquid is, thus, displaced from the chamber 1 into the stoma-restricting chamber 2 via the purely mechanical pumping mechanism caused by the passage of a solid food through the stoma. The stoma opening at the level of the chamber 2 is thereby narrowed, as is schematically illustrated in fig. 2. The displacement of the liquid occurs continuously during eating. Following eating the band is widened again after a predetermined time, by a backflow from the stoma-restricting chamber 2 into the chamber 1 being triggered.

According to a second embodiment of the gastric band illustrated in figs. 3 and 4 of the present application the two chambers 1 and 2 are not directly connected, but the sensory chamber 1 triggers an electric pump 12 between a reservoir 9 being connected with the second chamber 2.

According to the present invention a control of the gastric band is feasible by a displacement of the liquid between two chambers without adding or diverting liquid from or to the outside. With the present invention it is possible to achieve an auto-regulatory change of the stoma width of the gastric band.

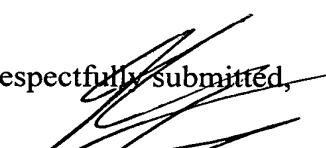
In contrast, the artificial sphincter according to the Baro, et al. reference is not intended to automatically enable the passage of a bite through the stoma. The artificial sphincter should only be opened and closed again by means of the manually operated suction-impeller pump. The chambers of the artificial sphincter of Baro, et al. always have the same pressure which clearly differentiate this embodiment from the embodiment according to the present invention.

Regarding claim rejections – 35 USC § 103 (items 5 to 8 of the Office Action)

Since according to the above argumentation in our opinion Baro et al. do not anticipate the present invention nor make it obvious, also a combination of the Baro et al. reference with the US Patent No. 7,037,343 (Imran, et al.) as well as a combination with the US publication No. 2001/0011543 (Forsell) and the US Patent No. 5,690,691 (Chen et al.) cannot make the present invention obvious. With respect to the Imran, et al. reference we refer to our argumentation of 25 October 2006.

Reconsideration and allowance are, therefore, requested.

Respectfully submitted,

  
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